

NIEL0001-100  
Serial No. 10/789,211

January 12, 2006 Response  
to September 12, 2005 Action

### **REMARKS**

Claims 1-40 are pending in this application. By this Response, several claims have been amended and new claims 41 and 42 have been added without introducing new matter. Claims 1-21 and 33-40 remain pending.

#### **Allowed Claims**

Applicants note with appreciation the indication that claims 8, 10, and 21 would be allowable if rewritten in independent form. Applicants, however, continue to believe they are entitled to broader coverage and present arguments to that effect below. Nevertheless, new claims 41 and 42 present the allowable subject matter of claims 8 and 21 in independent form.

#### **Interview**

Applicants note with appreciation the courtesies extended to their representative, Michael A. Patané, during the telephone discussion with Examiner Michael Cygan. During those discussions, the clarification that applicant's second temperature sensor detects the ambient temperature, and that the three measured signals were used to calculate relative humidity according to formula (5) on page 8 of the specification were thought to put the claims into condition for allowance, pending official review, of course. This response is consistent with those discussions.

#### **Claim Rejections – 35 U.S.C. § 102**

*Groeninger, US 5,189,902*

Claims 1-4, 6, 12, 13, 16-19, 22-26, 28-30, 33-36, and 38-39 stand rejected under 35 U.S.C. § 102 as allegedly anticipated by Groeninger (US 5,189,902). Applicants respectfully disagree.

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As discussed with the examiner, Applicants have amended the claims to recite that the second temperature sensor is positioned for measuring the temperature of the ambient air. Groeninger 902 does not disclose a second temperature sensor for sensing ambient air. Rather, the second temperature sensor 114b of Groeninger 902 is more internal and therefore further removed from ambient air. As discussed in Applicants' prior response, sensor 114b is located with the cavity of the Groeninger 902 device. Additionally, Groeninger 902 discloses a heater 116 which is simply not required or desirable in Applicants' claimed invention.

Groeninger 902 simply does not teach a temperature sensor positioned for sensing the temperature of the ambient mixture, and therefore cannot anticipate the claimed invention. Applicants respectfully submit that all pending claims are patentable over Groeninger 902.

*Campbell, US 5,816,704*

Claims 1-3, 6,7, 11-13, 16, 22-25, 33-35 and 38 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Campbell (US 5,816,704). The main focus of Campbell 704 is in measuring the dew point of a material, especially foodstuffs, that are in a sealed chamber containing a humidity sensor and a temperature sensor. The specification, however, does indicate that atmospheric dew points can also be measured with minor adaptations. Fig. 12 shows a device useful for such atmospheric determinations. Fig. 11 and accompanying text at col. 12, lines 17-28 describe an embodiment to be used in high humidity applications and includes an exterior temperature sensor 121. Notably the device of Fig. 11 and Applicants' claimed invention differ in the use of a heater 110. As we understand it, the heater is used to equilibrate the internal chamber temperature with that of the external temperature sensor, as alluded to in col. 5, lines 9-14 which state, in part "utilizes a heater control device, such as a

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heater, to speed up the period of time required for reaching equilibrium and/or to increase accuracy of measurements. . .” Additionally, the heater is used to create a temperature differential in high humidity or high precision applications (col. 12, lines 23-38).

In sharp contrast, Applicants’ claimed invention need not wait for thermal equilibrium, or bring it about artificially or create a temperature differential. Instead, the claimed invention takes the temperatures as it finds them and calculates the relative humidity based on these readings, according to formula 5, which is now included in the independent claims. The external temperature sensor generates a third signal which is used by the process in calculating the exterior relative humidity for the mixture at that temperature. No heating or cooling of the chamber mixture is required. This is a significant improvement over the prior art and is neither taught nor suggested by Campbell 704. Accordingly, withdrawal of the rejection of independent claim 1 and claims dependent therefrom is respectfully requested.

Campbell 704 later indicates that the heater can be used to create a temperature differential, and is preferred in high humidity or high precision applications. Applicants claimed invention simply does not require or desire the use of a heater. Independent claim 1 has been amended to indicate that the exterior relative humidity is calculated according to formula (5) of the specification. The two temperatures are correlated to known saturation values ( $ew_A$  and  $ew_C$ ) which are used in formula (5) to calculate the exterior relative humidity based on the three measured variables. Campbell 704 simply does not teach using the measured values in this fashion.

#### **Claim Rejections- 35 U.S.C. § 103**

Campbell 704, alone, is cited as rendering claims 4, 5, 14, 15, 19, 20, 26, 27, 30-32, 36, 37, and 40 obvious under 35 U.S.C. § 103. Campbell 704 in view of Groeninger 902 is cited as

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rendering claim 9 obvious under 35 U.S.C. § 103. In light of the comments above, Applicants respectfully disagree.

This rejection addresses only the dependent claims and none of the reasoning set forth in the rejections overcomes the obstacles discussed above in connection with either Groeninger 902 or Campbell 704 as discussed with regard to anticipation. There is nothing in either reference to teach or suggest the use of three signals, including one representative of a temperature exterior to the chamber, to calculate the relative humidity of a mixture outside the chamber. For this reason, Applicants respectfully request withdrawal of the rejections based on 35 U.S.C. § 103.

Applicants believe this reply is fully responsive to the Office Action. Applicants respectfully assert that all pending claims are allowable over the cited art and requests withdrawal of the rejection under 35 U.S.C. §§ 102 and 103.

Applicants hereby authorize the Commissioner to charge any fee due or credit any overpayment to deposit account 50-1275.

Early reconsideration and allowance of all pending claims is respectfully requested. The examiner is requested to contact the undersigned attorney if an interview, telephonic or personal, would facilitate allowance of the claims.

Respectfully submitted,  
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Date: January 12, 2006

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